



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,499	06/19/2001	Jeffrey A. Bedell	53470.003034	8688
21967	7590	03/28/2006	EXAMINER	
HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109			ALABAIDI, HAYTHIM J	
			ART UNIT	PAPER NUMBER
			2168	

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/883,499	Applicant(s) BEDELL ET AL.	
	Examiner Haythim J. Alaubaidi	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12,14-21 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19,20 and 26-29 is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,14-18 and 21 is/are rejected.
- 7) ☒ Claim(s) 3 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is a Non-Final Office Action in response to the amendment of December 30, 2005.
2. The Examiner acknowledges the cancellation of Claims 4, 13 and 22-25.
3. Claims 1-3, 5-12, 14-21 and 26-29 are presented for examination.

Response to Arguments

4. Applicant's arguments with respect to claims 1-3, 5-12, 14-21 and 26-29 have been considered but are moot in view of the new ground(s) of rejection.

Reopening Prosecution

5. In view of the pre appeal filed on December 30, 2005, PROSECUTION IS HEREBY REOPENED. To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 6-10, 15-18 and 21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandon Buteau (U.S. Patent No. 6,442,557 and Buteau hereinafter) in view of Necholas Pouschine (U.S. Patent No. 5,918,232 and Pouschine hereinafter) and further in view of Steven Schwartz (U.S. Patent No. 5,584,024 and Schwartz hereinafter).

Regarding Claims 1, 6, 8, 10, 15, 17 and 21, Buteau discloses,

a query structure assembly module based on query rules (Figure No. 9 and associated texts, i.e. the "WHERE" command would be one of the rules), the query assembly rules being used by the query structure assembly module to evaluate the desired data set (Figure No. 9 and associated text; see also Col 22, Lines 33-62);

a syntax assembly module for defining at least one query language statement (Figure No. 9 and corresponding text; see also Col 22, Lines 32-37);

whereby at least one query language statement may assembled and run against the data source (Figure No. 9, i.e. the "from" command would be the data source) to return the desired data result set (Figure No. 10 and corresponding text).

Art Unit: 2168

Buteau's reference discloses all of the claimed subject matter set forth above, except the reference does not explicitly indicate the process optimization module for evaluating processing options based upon a database schema associated with the data source. However, Pouschine discloses a process optimization module for evaluating processing options (Col 15, Lines 51-63; see also Figure No. 8, Element 214 and 128; see also Col 5, Lines 1-5) based upon a database schema associated with the data source (Col 14, Lines 57-60), i.e.

The calculation engine 18 (see FIG. 1) uses this information, in combination with information from the other dimensions, to help determine which table to access to get data for the model 50

(Col 16, Lines 43-46), i.e.

Evaluator 128 can also communicate with a math library 220, if a calculation is required, or a sorting and processing system 222, if the process requires ordering of results or sorting in some manner

Given the intended broad application of the Buteau's system, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Buteau with the teachings Pouschine to optimize the query processing and minimize the time associated with data retrieval especially in large databases.

The combination of both Buteau and Pouschine references discloses all of the claimed subject matter set forth above, except both references do not explicitly indicate the module for evaluating a plurality of methods for generating intermediate data sets.

However, Shwartz discloses the module for evaluating a plurality of methods for generating intermediate data sets (Conceptual layer) (Figure No. 5, Element 2; see also Col 9, Lines 31-42), i.e.

FIG. 5 shows a high level block diagram of an intelligent query system that embodies the principles of the invention. It is composed of two parts, the Query System 1 and Conceptual Layer 2. Conceptual Layer 2 is composed of information derived from database 3, including table and column information, and information entered by an administrator to provide more intuitive access to the user. Query System 1 uses the information from Conceptual Layer 2 as well as general knowledge about SQL and database querying to limit the user in building queries to only those queries which will produce semantically correct results.

and the ability to reuse them (Figure No. 5), i.e.

specific queries are coded and made available to users via question lists. For example, FIG. 3B shows a simple screen containing a list of predefined queries. Users can choose to run queries directly from the list or make minor modifications to the query before running it.

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of both Buteau and Pouschine with the teachings of Shwartz to include intermediate data sets In order to optimize the query process through simplifying the query language by attaching intermediate data sets.

Regarding Claims 7 and 16, Pouschine discloses accessing a syntax description (Col 14, Lines 9-13), i.e.

A SQL Audit facility allows a user to audit HQL queries that are sent from the client to the server and view the series of SQL queries that were generated by the Calculation Engine in the fulfillment of the HQL query.

Regarding Claims 9 and 18, Pouschine discloses wherein the system is a component in an online analytical processing system (Col 11, Lines 49-61; see also Col 32, Lines 63-66).

8. Claims 2, 5, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buteau, Pouschine and Schwartz in view of Ting Leung (U.S. Patent No. 6,574,623 and Leung hereinafter).

Regarding Claims 2, 5, 11 and 14, the combination of Buteau, Pouschine and Schwartz references disclosed all of the claimed subject matter set forth above except for the feature of evaluating the size of a selected set of tables, nor does it explicitly indicate the length of the selected path. However, Leung discloses evaluating the size of a selected set of tables and the length of the selected path (Col 4, Lines 18-25), i.e.

Generally, the SQL statements received as input specify only the desired data, but not how to retrieve the data. ***This step considers both the available access paths*** (indexes, sequential reads, etc.) and system held statistics on the data to be accessed (the size of the table, the number of distinct values in a particular column, etc.), to choose what it considers to be the most efficient access path for the query

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Buteau, Pouschine and Shwartz with the teachings of Leung to obtain the query results in the quickest way possible (the shortest path to the data source) and from the smallest table size as to minimize the time spent in scanning the data table for the desired information, which leads to increase the system performance by not holding-up the resources.

Allowable Subject Matter

9. Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is the Examiner's statement of reasons for the indication of allowable subject matter:

Regarding Claims 3 and 12, Applicant's particular system and associated methods in retrieving and processing data sets from one or more data sources is wherein the process optimization module includes an intermediate data processing selection module for evaluating the reusability of an intermediate data set in returning the defined data result set in combination with the other limitations of the claims, was

not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record or that encountered in searching of the prior art.

11. Claim 19 is allowed over the prior art of record for the same reason indicated in objecting to Claims 3 and 12; and in combination with all of the other limitations of claim 19, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record or that encountered in searching of the prior art.

Dependent Claim 20 being further limiting to independent Claim 19 definite and enabled by the Specification is also allowed.

12. Claims 26-29 are allowed over the prior art of record.

13. The following is the Examiner's statement of reasons for the indication of allowable subject matter:

Regarding Claims 26-29, Applicant's particular system, readable medium and associated methods in retrieving and processing data sets from one or more data sources is wherein the process optimization module's evaluation of a plurality of methods for generating intermediate data sets comprises determining whether creation of a permanent table, temporary table, view, derived table, or sub-query is the most efficient method for handling intermediate data calculations in combination with the

Art Unit: 2168

other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record or that encountered in searching of the prior art.

Points of Contact

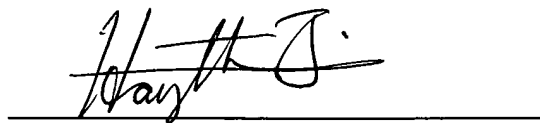
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haythim J. Alaubaidi whose telephone number is (571) 272-4014. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached at (571) 272-3642.

Any response to this office action should be mailed to:

The Commissioner of Patents and Trademarks, Washington, D.C. 20231 or Faxed at our central fax number (571) 273-8300.

Hand-delivered responses should be brought to the Customer Service Window of the Randolph Building at 401 Dulany Street, Alexandria, VA 22314



Patent Examiner
Technology Center 2100
Art Unit 2168



TIM VO
PRIMARY EXAMINER